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ABSTRACT

The intent of this study was to reduce the numbers of off-task behaviors of a group of 32 sixth-grade students in an economically disadvantaged, urban, junior high school. The subjects of the study were given the materials (paper, the mathematics book, and pencils) and seated before the tardy bell. Following teacher graphing of each of the behaviors, students monitored their own behaviors for 10 days and received positive reinforcement through stickers. The results of an A-B withdrawal study showed that adolescents' on-task behaviors, in a regular classroom, can be increased with the implementation of self-monitoring and self-graphing. All on-task behaviors but one improved. Results indicated that on-task behaviors can be improved and effectively faded with self-monitoring and self-graphing. Two graphs illustrate findings. (Contains 9 references.) (SLD)

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Effects of Self-Monitoring, and Self-Graphing on Students' Preparedness : As a Prerequisite for Academics

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Abstract

It was the intent of this study to reduce the amount of off-task behaviors of a group of 32 students in an economically disadvantaged, urban, junior high school. The results of an A-B withdrawal study showed that adolescents' on-task behavior, in a regular classroom, can be increased with the implementation of self-monitoring and self-graphing. All but one on-task behavior improved. Results indicated that on-task behavior can be improved and effectively faded with self-monitoring and self-graphing.

Inappropriate and off-task behavior is a concern of educators. Academic achievement and behavior are related (Gaddy,1988). A key premise of this study is that students' unpreparedness may be an indicator of behavior problems.

It is clear more time spent on instruction has a positive impact on children. A great deal of instructional time is lost at the beginning of the class period. Organizing an effective classroom routine that indicates the start of a lesson is an ideal method to ensure enough time for instruction. A major tenet of this routine should include a consistent, quick and smooth way of checking and recording whether or not the student is prepared for effective instruction (Slavin, 1994).

Self-monitoring has been used successfully in reducing problem behavior and increasing on-task performance. Self-monitoring has been found to be most productive when the desired behaviors are nonaggressive and relatively easy to change. Self-monitoring may be particularly effective with adolescents. Monitoring may meet adolescent needs for power, competence, and being in control of their environment. Furthermore, self-management may be done with less resistance from these students than techniques that use external controls (Carter, 1993).

The benefits of self-management techniques include increasing students' responsibility for their own behavior, student motivation, and self-esteem. It also reduces demands on teachers' time (The Council for Exceptional Children, 1990). Furthermore, self-monitoring has been used successfully across subjects, from ages 8 years to 17 years, in special

education, and regular classrooms. This may include students with learning disabilities and on-task behavior problems (Webber et al., 1993).

Self-Monitoring and Self-Graphing

Self-monitoring and self-graphing often consists of two elements: self-observation and self-recording (Di Gangi, Maag, Rutherford, 1991). It has been confirmed that self-monitoring produces stronger results when combined with self-graphing. Self-graphing seems to stimulate the reactivity of self-monitoring with on-task behaviors. Graphing displays changes and subjects can use graphs to compare past and current behaviors in a way that can be viewed easily. Furthermore, graphing provides students with a picture of their progress, which allows the students to make predictions on future performances. In addition, graphing can be of benefit to the teacher. Teachers may assess the graphing to make their teaching strategies more precise (DiGangi et al . , 1991).

Self-Monitoring and Positive Reinforcement

The efficacy of teaming self-monitoring with positive reinforcement is in contention. Recent research by Prater et al. (1991) has indicated that positive reinforcement is not necessary when using self-monitoring. However, there is research that supports the use of reinforcements paired with self-monitoring (Wolery, Bailey, & Sugai, 1991). Positive reinforcement when combined with self-monitoring has been successful in keeping unmotivated subjects on-task (Prater et al . , 1991).

Purpose

The purpose of this study was to establish the effects self-

monitoring, combined with self-graphing and positive reinforcement, as it relates to on-task behavior of 32 students in a regular math class. The authors of this study believed that there would be an increase of on-task behavior when the treatment, self-monitoring and self-graphing was implemented.

Method

Subjects

All of the teachers in this particular junior high school were invited to be part of this study. One teacher volunteered the use of her classroom of 32 students. The students ranged in age from II years 3 months to 13 years 2 months. The teacher reported that she had problems with her students' readiness for classroom participation.

Setting

Treatment occurred in an economically disadvantaged, junior high school located in an urban area of northwestern Ohio. The study was conducted in a sixth-grade, departmentalized, classroom of 32 children for one hour of daily math instruction, Monday through Friday.

On-task behaviors. On-task behaviors was defined as conduct which demonstrated preparedness for instruction. Four behaviors formed the focus of the study. Did students have a: 1) supply of writing paper, 2) math book, and 3) pencils, at the start of instruction? The fourth behavior focused upon whether the student was seated before the tardy bell.

Procedure

A group A-B Withdrawal design (Woolery et al 1991) was employed for a

period of 18 school days.

Baseline. Prior to the treatment, the teacher recorded the total frequency of each of the four behaviors at the beginning of class for eight consecutive school days. Subjects were reminded that certain things were required (the four on-task behaviors) before a math lesson could effectively take place. During this phase the instructor kept a chart which consisted of making a tally mark for each event of off-task behavior. The students were not made aware of the fact that the teacher was charting their targeted behavior.

Self-monitoring, Self-graphing and positive reinforcement. During this phase, which lasted 10 days, subjects were asked to put a sticker on a prepared chart for each of the on-task behaviors they had successfully completed. Positive reinforcement was provided through the use of the stickers. The instructor continued to covertly chart their off-task and on-task behavior.

Fading. This phase occurred for two weeks after the initial treatment phase. The instructor allowed the students to chart and graph their behavior on 5 random days during this two week period.

RESULTS

During the baseline phase 3% of the children did not have their paper. Six percent of children did not have a text book. Tardies and not having a pencil both occurred at the rate of 9%. The combined, average number of off-task behaviors was 18% per day.

The treatment phase produced no major differences in the amount of children who had paper. Subjects who were without their text books

dropped from 6% to 3%. Two percent of the students did not have their pencils. The amount of tardies was reduced from 9% to 1%. The combined number of daily off-task behaviors were reduced from 18% to 3%.

The combined number of off-task behaviors continued to be approximately 3%, during the fading phase.

Figure 1 summarizes the frequency of off-task behaviors that occurred during the different phases.

Insert Figure 1 and Figure 2 here.

DISCUSSION

Implications for the Classroom

Although self-monitoring is an effective intervention, the combination of self-charting and reinforcement may increase its magnitude. All the techniques in this study can be adapted easily, quickly and with relatively low-cost. Students are responsible for their own charting. The instructor merely has to pass out stickers which represent the positive reinforcement for appropriate behaviors.

In this study self-monitoring and self-graphing proved to be time efficient, enjoyable and an effective approach to increase the students preparedness. The classroom teacher commented that she was pleased with how well the self-graphing worked and how easy it was to use. She also informed the researchers that the children looked forward to and enjoyed the self-monitoring activity, especially the feature of receiving

stickers. Another positive feature of this procedure is that it provided a consistent routine at the beginning of each math session. Students knew what to expect thus minimizing chaos which then transcended to longer instruction time.

Though self-monitoring may be an effective tool to use in increasing students academics, this factor was not researched in this study. The researchers of this study would be interested in the degree to which self-monitoring effects grades.

It is clear that having the children self-graph and self-monitor their behavior, is an important tool for increasing on-task behavior.

References

Carter, J. (1993). Management: Education's ultimate goal. Teaching Exceptional Children, (Spring), 28-32.

DiGangi, S., Maag, J., & Rutherford, R. (1991). Self-graphing of on-task behavior: Enhancing the reactive effects of self-monitoring on on-task behavior and academic performance. Learning Disability Quarterly, 14, (Summer), 221-227.

Gaddy, G. (1988). High school order and academic achievement. American Journal of Education, (August), 496-515.

Osborne, S., Kosiewicz, M., Crumley, E., & Lee, C. (1987). Distractible students use self-monitoring. Teaching Exceptional Children, (Winter), 66-69.

Prater, M., Joy, R., Chilman, B., Temple, J., & Miller, S. (1991). Self-monitoring of on-task behavior by adolescents with learning disabilities. Learning Disability Quarterly, 14 (Summer), 165-172.

Self-management strategies. (1990). Office of Educational Research and Improvement, U.S. Department of Education; Council for Exceptional Children. (ERIC Document Reproduction Service No. ED 319227)

Slavin, R., (1994). Educational psychology (4th ed.). Boston, Mass.: Allyn and Bacon.

Webber, J., Scheuermann, B., McCall, C., & Coleman, M. (1993). Research on self-monitoring as a behavior management technique in special education classrooms: A descriptive review. Remedial and

Special Education, 14(2), 38 -56.

Wolery, M., Bailey, D., & Sugai, G., (1992). Effective teaching, principles and procedures of applied behavior analysis with exceptional students. Boston, Mass.: Allyn and Bacon.

Figure 1:

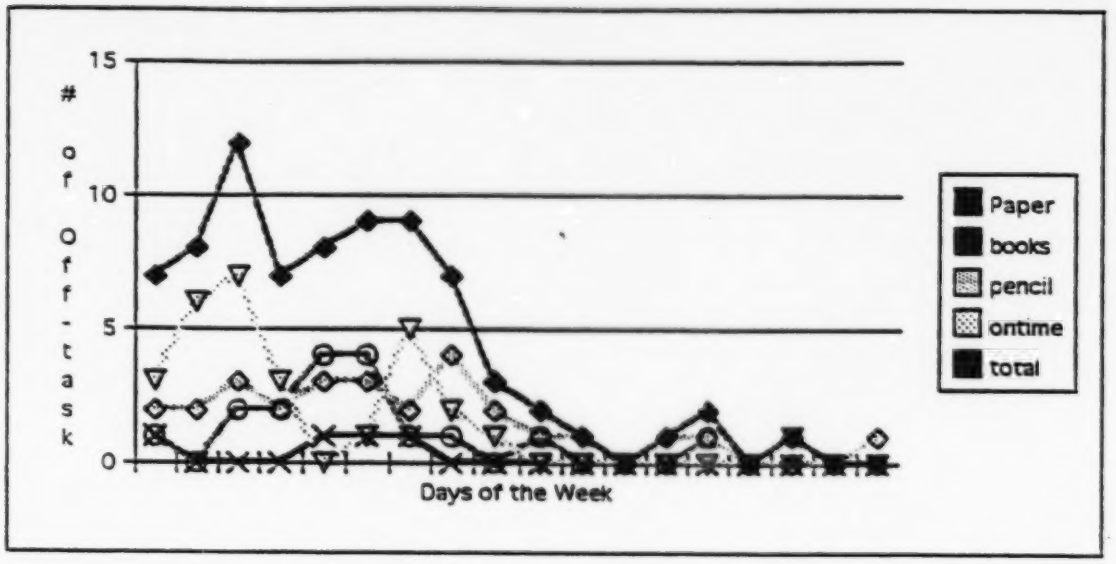

Figure 2: